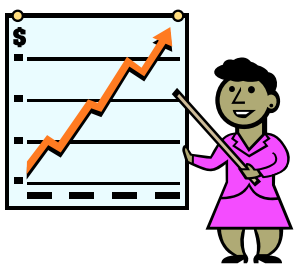

Happy
Thanksgiving!

November EH ViTS, 11/16/05

Today's Agenda

- **Introduction**

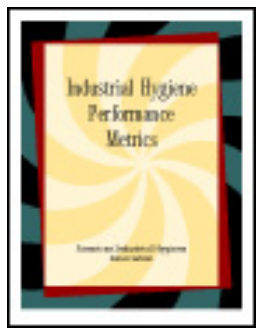
- **Performance Metrics**
  - Metrics Primer
  - **"Emerging Trends" -** Becky Randolph, CIH, BMS Solutions
  - Center Performance Metrics Examples
    - JPL, MSFC, LRC, ARC, MAF



Metrics Primer-

Concepts and Definitions

- Center Occupational Health & Safety Performance metrics are tools that will enable a program to better assess, manage, and improve organization and program functions within the overall NASA OH Program.
- If designed properly, performance metrics show:
  - How well an organization is performing.
  - If it is meeting its goals.
  - If its processes are in control.
  - If and where improvements can be made.
  - If previous improvement strategies yield the desired results.



- Performance metrics are only truly effective tools if trended over time, *not taken at one point in time*.

Metrics Primer-

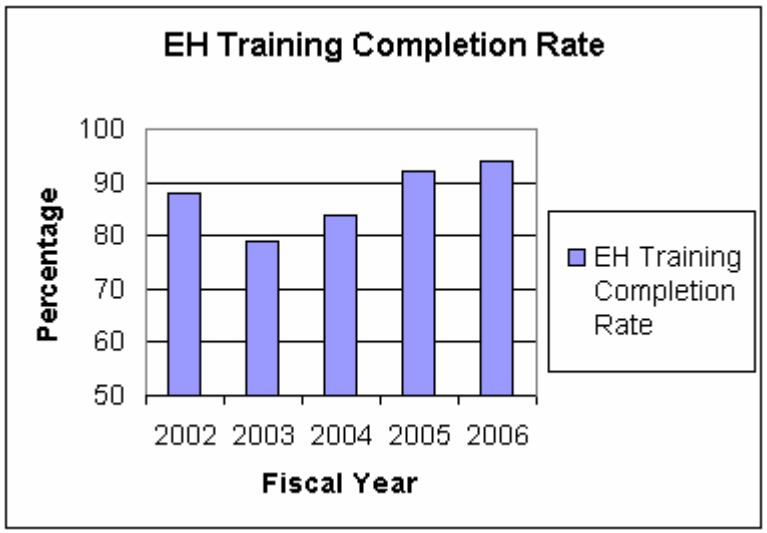
Concepts and Definitions

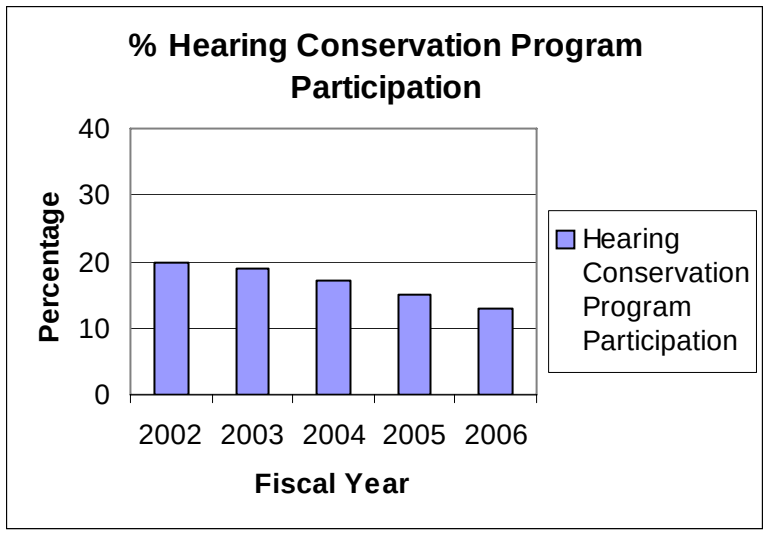
- Some metrics are considered **“leading indicators”** in that they may be able to predict what would happen. Trending of leading indicators should prove or disprove their predictive power.
- Some metrics are **“lagging (trailing) indicators”** in that they measure what has already happened. An OH program is supposed to prevent occupational disease, so some lagging indicators could indicate failures; failure in a program or failure in a process .
- Professionals who choose to better measure the effectiveness of their occupational disease prevention programs are likely to identify a more reliable investment of organizational resources in the prevention of occupational disease.

Metrics Primer

Concepts and Definitions

- The primary intention of implementing performance metrics is to **drive improvement** at a Center, as they could trend this information and attempt to improve their program.
- Performance Metric Examples;





Metrics Primer
Building the Case

- Given our performance based Occupational Health service contract environment in NASA it is important to note that some metrics may be more geared towards **service contract performance** versus overall IH program performance (such as reducing HCP participation, or reducing amount of hazardous exposures (>50% exposure limit)). Although these could also be similar.
- What does **ANSI Z10** say about the use of metrics?
  - ***6.1 Monitoring, Measurement, and Assessment.***
  - E.6.1 *Organizations* ***should develop predictive or "leading" performance measures or indicators***. *The organization can use these measures to identify and correct problems and identify opportunities for risk reduction before injuries or illnesses occur…..*

More from Z10 (E.6.1) continued

- *Examples of indicators of potential problem areas.*
  - *Human factors risks*
  - *Near-miss incidents*
  - *Non conformances found during inspections*
- *Examples of indicators that demonstrate the effectiveness of the OHSMS*
  - *Reduction of average exposure levels*
  - *The rate and timeliness of completion of corrective actions*
  - *The completion of required training*
- ***Indicators should be designed according to the hazards/issues in the workplace and ……. communication should be tailored to the audience***

More from Z10 (E.6.1) continued

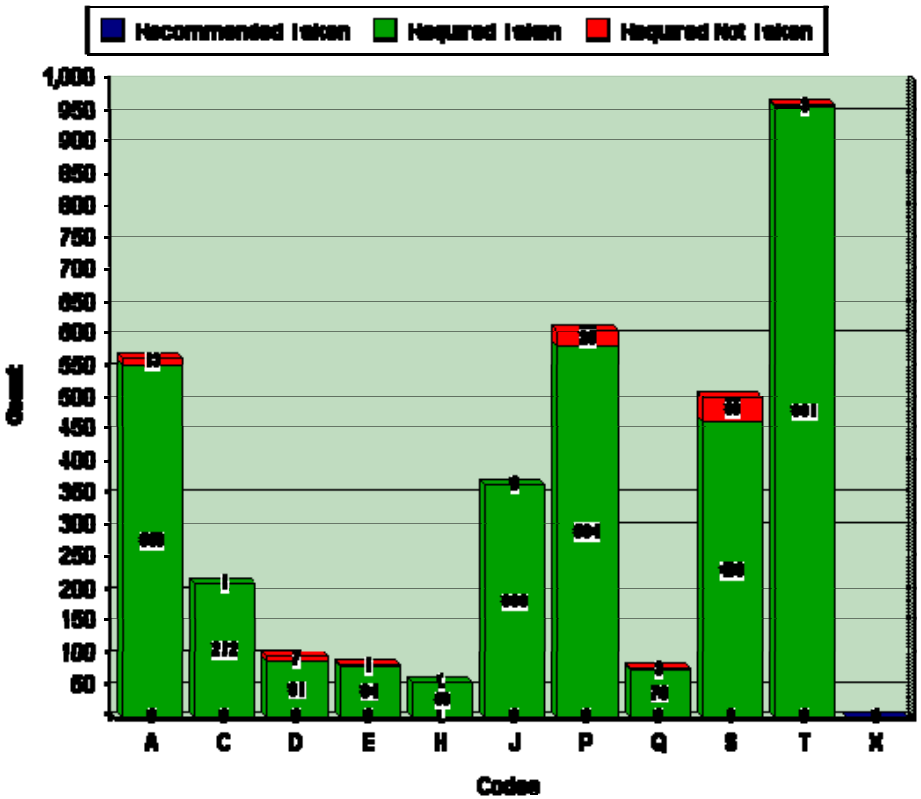
- ***E.6.1C***
  - *Organizations should develop measures of performance that enable them to see how they are doing in preventing injuries and illnesses.*
  - *Occupational injury and illness rates are a common yardstick for measuring the effectiveness of an OHSMS, and they play a valuable role.*
  - *These rates, however, should rarely be the sole or primary tool to evaluate performance of an OHSMS, for several reasons. Primarily, these rates measure the very injuries, illnesses and material losses that a management system is trying to prevent.*
  - *When injury indicators are the only measure, there may be significant pressure for organizations to* ***"manage the number" rather than improve or manage the process.***

Exxon Mobil Metric Example

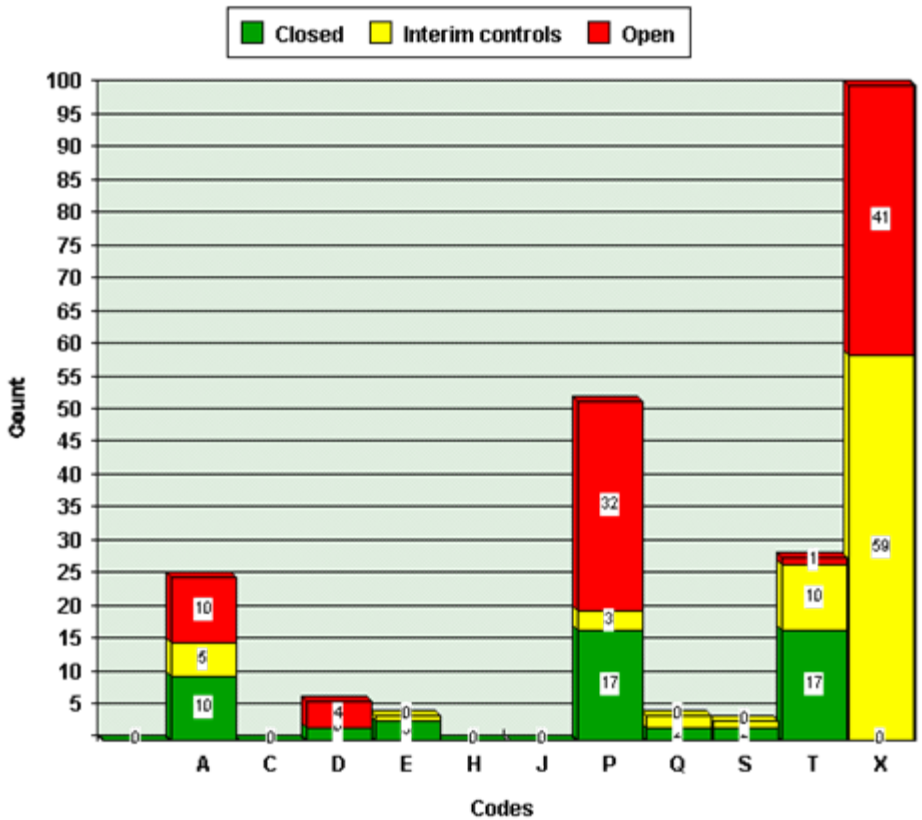
- Starting to use one Key Performance Indicator (KPI) to role up
- Focuses on Risk Management
- "The metric we are starting to push is the **Exposure Incidence Rate**. We calculate it as the number of workers with long term average exposure above an exposure limit per 200,000 work hours. The denominator is the same one used for calculating our Safety incidence rates. Since we do not consider personal protective equipment when assessing exposure, the metric provides a measure of our reliance on PPE.
- We calculate both metrics: > 100% exposure limit and > 50% exposure limit. Right now we are leaning toward reporting the > 100% to Corporate.

Ames Metrics

Health and Safety Training

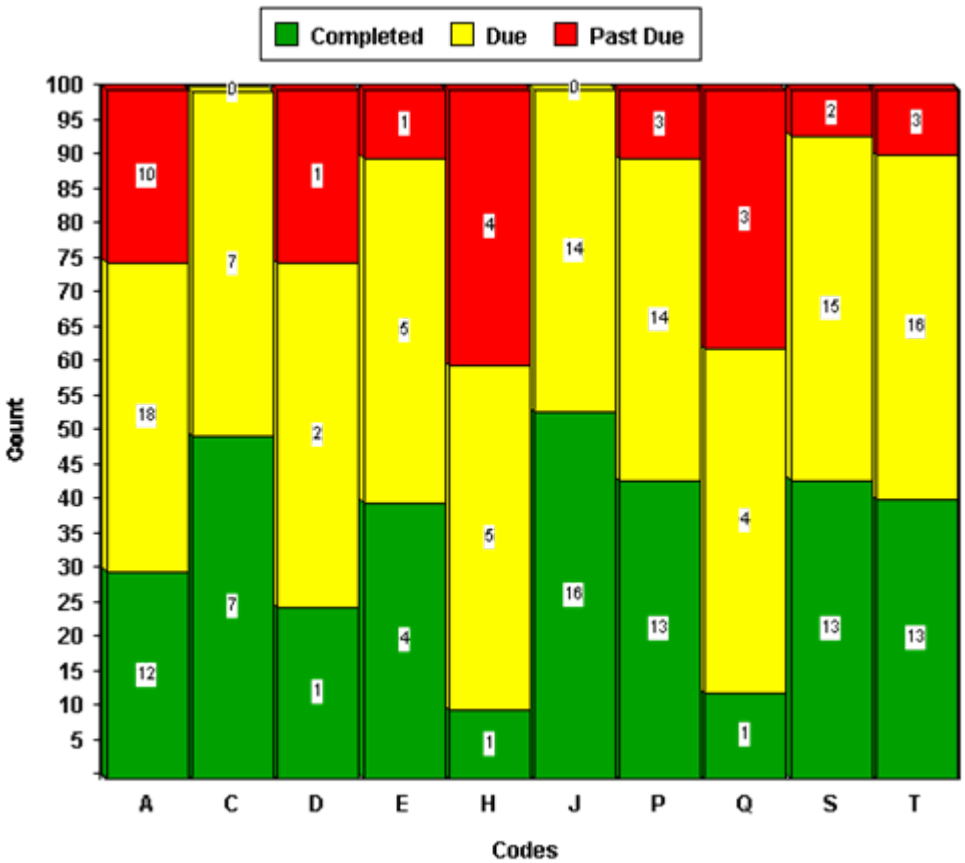


Outstanding Hazard Issues

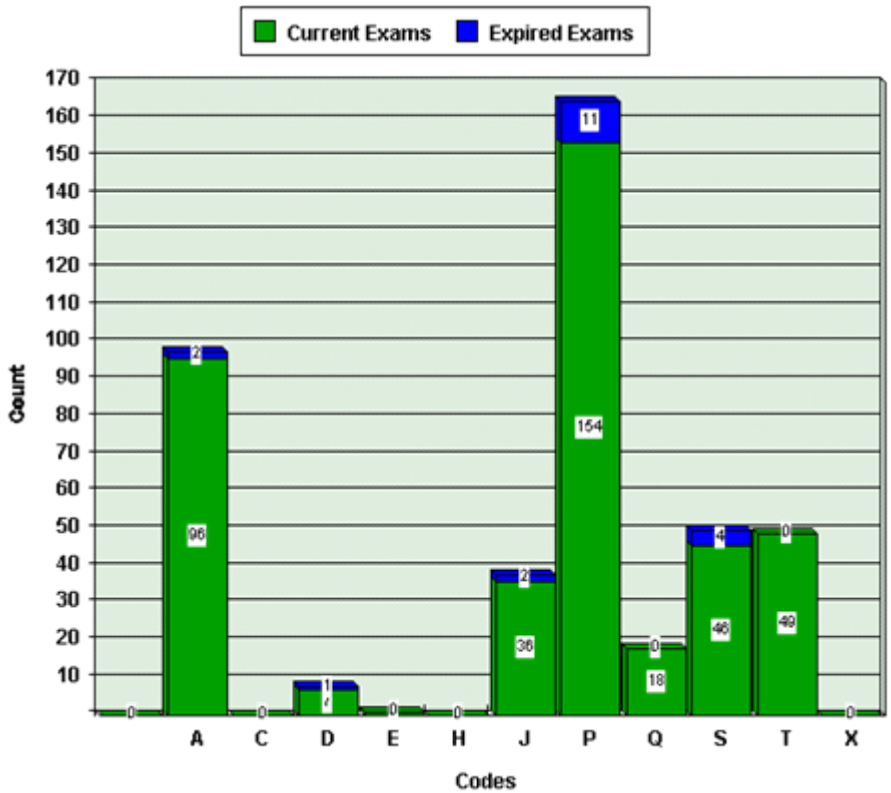


Ames Metrics

Health & Safety Inspections



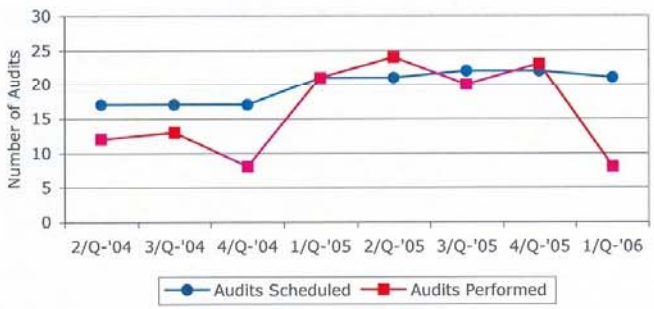
Physical Exam Completion



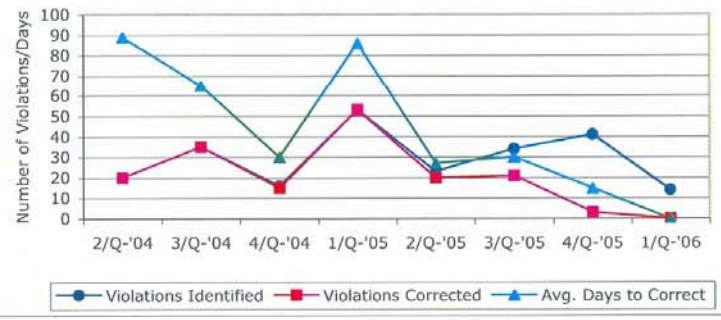
Langley Metrics

Industrial Hygiene Audits

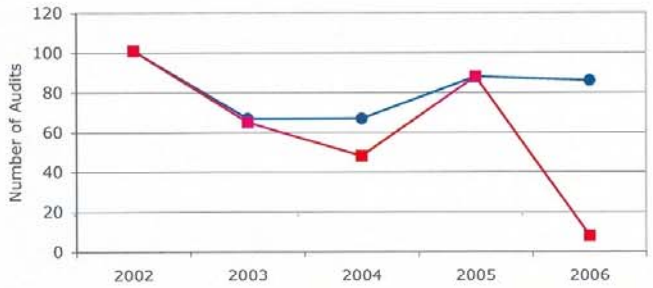
Number of Industrial Hygiene Audits Scheduled & Performed By Quarter



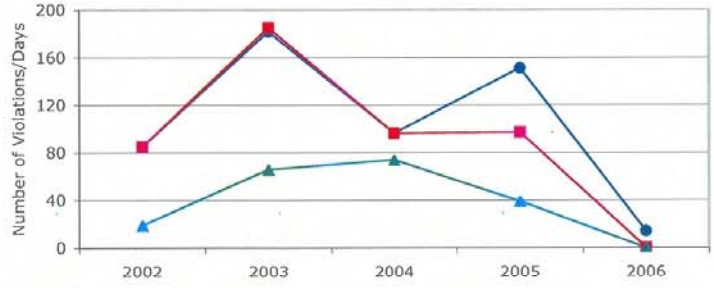
Number of Industrial Hygiene Audit Violations Identified & Corrected By Quarter



Number of Industrial Hygiene Audits Schedule & Performed Annually



Number of Industrial Hygiene Audit Violations Identified & Corrected Annually



Goal Statement: Conduct a minimum of 67 industrial hygiene audits annually and have any violation cited, corrected within 90 days of citing. **Metric Description:** This metric tracks the number of industrial hygiene audits scheduled and performed; the number of violations cited; the number of violations corrected; and the number of days taken to correct violations. **Source:** Audit Tracking System. **Update Frequency:** Monthly. **Metric Owner:** Head, Safety and Facility Assurance Branch, SMAO. **POC:** Janet Edmondson (49225).

11/8/05